

Evidence-Based Practice (EBP) - E202

Poster

Abstract Title:

Time Well Spent: Development of a Data Validation Dashboard for Trauma Registries

Authors:

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Background & Purpose:

Trauma registry (TR) data is utilized in trauma centers for performance improvement (PI), injury prevention, research and increasingly, outcome measures. Previous reports have outlined data validation plans for TR but have been scant on implementation details. Questioning the accuracy of TR reports led us to develop a data validation program to reduce errors and improve data quality. A clinical dashboard, modeled after those used in PI was implemented to provide a quick look at key information (like an automotive dashboard) and to monitor progress.

Study/Project Design:

The TR dashboard began in 2008 and includes individual and group measurement of quantity, accuracy and quality.

Setting:

A university affiliated state designated regional (Level I) trauma center.

Sample:

The TR utilizes a commercially available software program. Over 1700 annual cases are collected concurrently on laptop computer by two full time nurse registrars.

Procedures:

The dashboard is populated from weekly TR reporting. Accuracy reporting is based on the National Trauma Data Bank (NTDB) error checks, error prone fields (date and time), certain non-logical events (E-code for driver of a car with patient age < 16 years) and fields of clinical or research significance (bleeding disorder selected without a V-code indicating medication type). Reports are run weekly and errors are returned to the registrar for correction. 10% of cases are randomly selected each week and validated for data quality by chart review. Injury and non-injury codes are the only fields to undergo re-abstraction because they are high risk (factoring into risk adjusted mortality rate (RAMR)) and error prone (as hospital coding is bound by coding constraints).

Findings/Results:

The TR dashboard has been successful in improving data integrity. Level One type errors were reduced from 9.54% in 2008 to 0% in 2012 on the NTDB Validator Report. Accuracy was enhanced by fully utilizing the registry software edit check capabilities and utilizing electronic data transfer from the hospital computer system. Each registrar is provided with weekly feedback and monthly dashboard. Reports are customized to aid in self-evaluation and professional development. The quality review has identified differences in registrar abstraction. Differences in interpretation and misunderstandings of complications and comorbid conditions have been reduced through refinement of the registry and/or data dictionary, staff education, and continued monitoring. Consistency in coding has been enhanced. Fears that the data validation would be a time burden have not been proven. The time spent is negligible in comparison with the substantial gains in data reliability.

Discussion/Conclusions/Implications:

Validation of a large volume trauma registry can be accomplished with an organized effort and minimal time. A TR dashboard facilitates quality measurement and provides feedback to staff. Recent hiring of a new nurse registrar is providing an opportunity to use the dashboard as a monitor of progress during orientation. Future plans include involving the registrars in quality assessment. This data validation process enables us to have full confidence in its trauma registry data. This data validation process ensures reliable trauma registry data needed to operate a trauma center.